

Brain (Medulloblastoma) treatment outcome gene markers (top 100: 50 + 50)  
upregulated in high risk, downregulated in low risk

## Gene Description

L17131\_rnai\_at High mobility group protein (HMG-I(Y)) gene exons 1-8  
X74801\_at T-COMPLEX PROTEIN 1, GAMMA SUBUNIT  
L36069\_at High conductance inward rectifier potassium channel alpha subunit mRNA  
Y07604\_at Nucleoside-diphosphate kinase -  
U34038\_at Proteinase-activated receptor-2 mRNA  
X59798\_at CCND1 Cyclin D1 (PRAD1; parathyroid adenomatosis 1)  
X87241\_at HFAT protein  
U66619\_at SWI/SNF complex 60 KDa subunit (BAF60c) mRNA  
M64347\_at FGFR3 Fibroblast growth factor receptor 3 (achondroplasia, thanatophoric dwarfism)  
L35594\_at Autotaxin mRNA  
HG3523-HT4899\_s\_at Proto-Oncogene C-Myc, Alt. Splice 3, Orf 114  
X05360\_at CDC2 Cell division cycle 2, G1 to S and G2 to M  
L26081\_at Semaphorin-III (Hsema-I) mRNA  
X64624\_s\_at HOMEOBOX/POU DOMAIN PROTEIN RDC-1  
X13293\_at MYBL2 V-myb avian myeloblastosis viral oncogene homolog-like 2  
U15008\_at SnRNP core protein Sm D2 mRNA  
X03794\_s\_at HOXB5 Homeo box B5 (2.1 protein)  
X77533\_at Activin type II receptor  
D28473\_s\_at IARS Isoleucine-tRNA synthetase  
D50914\_at KIAA0124 gene, partial cds  
U63743\_at Mitotic centromere-associated kinesin mRNA  
U86782\_at 26S proteasome-associated pad1 homolog (POH1) mRNA  
X54938\_at ITPKA Inositol 1,4,5-trisphosphate 3-kinase A  
L12711\_s\_at TKT Transketolase (Wernicke-Korsakoff syndrome)  
L33842\_rnai\_at (clone FFE-7) type II inosine monophosphate dehydrogenase (IMPDH2) gene, exons 1-13  
M14328\_s\_at ENO1 Enolase 1, (alpha)  
M36072\_at RPL7A Ribosomal protein L7a  
X69150\_at Ribosomal protein S18  
U28749\_s\_at High-mobility group phosphoprotein isoform I-C (HMGIC) mRNA  
U12595\_at Tumor necrosis factor type 1 receptor associated protein (TRAP1) mRNA, partial cds  
X51757\_at HSPA6 Heat shock 70kD protein 6 (HSP70B')  
U09178\_s\_at Dihydropyrimidine dehydrogenase mRNA  
U05572\_s\_at MANB Mannosidase alpha-B (lysosomal)  
HG1800-HT1823\_at Ribosomal Protein S20  
U23752\_at SOX11 SRY (sex-determining region Y)-box 11  
Z26317\_at DSG2 Desmoglein 2  
U62531\_at SLC4A2 Solute carrier family 4, anion exchanger, member 2 (erythrocyte membrane protein band 3-like 1)  
Z31560\_s\_at SOX2 SRY (sex determining region Y)-box 2  
U72509\_s\_at Alternatively spliced B8 (B7) mRNA, partial sequence  
U84573\_at Lysyl hydroxylase isoform 2 (PLOD2) mRNA  
M12625\_at Lecithin-cholesterol acyltransferase mRNA, with 5' and 3' flanking DNA sequences  
S78187\_at M-PHASE INDUCER PHOSPHATASE 2  
X05299\_at CENPB Centromere protein B (80kD)  
L27584\_s\_at CAB3b mRNA for calcium channel beta3 subunit  
HG613-HT613\_at Ribosomal Protein S12  
L00058\_at MYC V-myc avian myelocytomatosis viral oncogene homolog  
M13934\_cds2\_at RPS14 gene (ribosomal protein S14) extracted from Human ribosomal protein S14 gene  
U14972\_at Ribosomal protein S10 mRNA  
L32866\_at Effector cell protease receptor-1 (EPR-1) gene, partial cds  
M38591\_at S100A10 S100 calcium-binding protein A10 (annexin II ligand, calpastatin I, light polypeptide (p11))

Figure 1A

Figure 2A  
**High in Medulloblastoma (MD) Low in Glioblastoma (Glio)**

Gene	Description
1 M14483_mna1_s_at	PTMA gene extracted from Human prothymosin alpha mRNA
2 D13413_mna1_s_at	Tumor-associated 120 kDa nuclear protein p120, partial cds(carboxyl terminus)
3 U14970_at	RPS5 Ribosomal protein S5
4 L06505_at	RPL12 Ribosomal protein L12
5 L11566_at	RPL18 Ribosomal protein L18
6 Z49148_s_at	Enhancer of rudimentary homolog mRNA
7 U12404_at	HSPB1 Heat shock 27kD protein 1
8 X69150_at	Ribosomal protein S18
9 Z25749_mna1_at	Ribosomal protein S7
10 X67247_mna1_at	RPS8 gene for ribosomal protein S8
11 U58682_at	RPS28 Ribosomal protein S28
12 HG3214-HT3391_at	Metallopanstimulin 1
13 X62691_at	40S RIBOSOMAL PROTEIN S15A
14 M84711_at	RPS3A Ribosomal protein S3A
15 U38810_at	Mab-21 cell fate-determining protein homolog (CAGR1) mRNA
16 M31520_at	Ribosomal protein S24
17 AB002533_at	RPLP2 Hemoglobin, beta
18 X69391_at	RPL6 Ribosomal protein L6
19 M77232_mna1_at	Ribosomal protein S6 gene and flanking regions
20 U25034_s_at	Neuronatin alpha mRNA
21 D87735_at	CAG-is1 7 {trinucleotide repeat-containing sequence} [human, pancreas, mRNA Partial, 701 nt]
22 X52966_at	RPL35A Ribosomal protein L35a
23 U15008_at	SnRNP core protein Sm D2 mRNA
24 HG1800-HT1823_at	Ribosomal Protein S20
25 U47634_at	TUBB Beta-tubulin
26 Y10807_s_at	Suppressor for yeast mutant
27 U14971_at	RPS9 Ribosomal protein S9
28 X70683_at	SOX4 SRY (sex determining region Y)-box 4
29 X04434_at	IGF1R Insulin-like growth factor 1 receptor
30 X55954_at	RPL17 Ribosomal protein L17
31 X64707_at	60S RIBOSOMAL PROTEIN L13
32 M18000_at	40S RIBOSOMAL PROTEIN S17
33 D76435_at	Zic protein

downregulated in high risk, upregulated in low risk

Gene Description

L13923\_at FBN1 Fibrillin 1 (Marfan syndrome)  
L33799\_at PCOLCE Procollagen C-endopeptidase enhancer  
S76475\_at NTRK3 Neurotrophic tyrosine kinase, receptor, type 3 (TrkC)  
D28124\_at Unknown product  
D29956\_at PROBABLE UBIQUITIN CARBOXYL-TERMINAL HYDROLASE  
HG2994-HT4850\_s\_at Elastin, Alt. Splice 2  
U50136\_rna1\_at Leukotriene C4 synthase (LTC4S) gene  
U63455\_at SUR Sulfonylurea receptor (hyperinsulinemia)  
U28963\_at Gps2 (GPS2) mRNA  
M55593\_at MMP2 Matrix metalloproteinase 2 (gelatinase A, 72kD gelatinase, 72kD type IV collagenase)  
M73547\_at POLYPOSIS LOCUS PROTEIN 1  
X69398\_at CD47 CD47 antigen (Rh-related antigen, integrin-associated signal transducer)  
AFFX-BioB-M\_st AFFX-BioB-M\_st (endogenous control)  
J02611\_at APOD Apolipoprotein D  
S66541\_s\_at B-50=neural phosphoprotein [human, Genomic, 778 nt, segment 3 of 3]  
HG2525-HT2621\_at Helix-Loop-Helix Protein Delta Max, Alt. Splice 1  
X15880\_at COL6A1 Collagen, type VI, alpha 1  
S71824\_at NEURAL CELL ADHESION MOLECULE, PHOSPHATIDYLINOSITOL-LINKED ISOFORM PRECURSOR  
X68994\_at CREB gene, exon Y  
X52022\_at RNA for type VI collagen alpha3 chain  
HG4011-HT4804\_s\_at Dystrophin-Associated Glycoprotein, 50 Kda, Alt. Splice 2  
X15882\_at COL6A2 Collagen, type VI, alpha 2  
U70867\_at Prostaglandin transporter hPGT mRNA  
D14686\_at AMT Glycine cleavage system protein T (aminomethyltransferase)  
D31815\_at SMP-30 (senescence marker protein-30)  
U78180\_at Sodium channel 2 (hBNaC2) mRNA, alternatively spliced  
U66661\_at GABA-A receptor epsilon subunit mRNA  
M64099\_at GAMMA-GLUTAMYLTRANSPEPTIDASE 5 PRECURSOR  
U40271\_s\_at PTK7 Protein-tyrosine kinase 7  
Y09616\_at Carboxylesterase (hCE-2) mRNA  
HG2686-HT2782\_at Ryanodine Receptor 3  
U28811\_at Cysteine-rich fibroblast growth factor receptor (CFR-1) mRNA  
HG4318-HT4588\_s\_at Lim-Domain Transcription Factor Lim-1  
Z38133\_s\_at Myosin  
L06419\_at PLOD Lysyl hydroxylase  
X76732\_at DNA-BINDING PROTEIN NEFA PRECURSOR  
D80004\_at KIAA0182 gene, partial cds  
HG4390-HT4660\_at Ribosomal Protein L18a Homolog  
U05291\_at FMOD Fibromodulin  
K02054\_at GRP Gastrin-releasing peptide  
X93510\_at 37 kDa LIM domain protein  
AFFX-BioDn-5\_st AFFX-BioDn-5\_st (endogenous control)  
Y10615\_at CYRN2 gene  
M96739\_at NSCL-1 mRNA sequence  
U95740\_rna2\_at 362G6.2 gene extracted from Human chromosome 16p13.1 BAC clone CIT987SK-362G6 complete sequence  
U43747\_s\_at FRDA Friedreich ataxia  
U38268\_at Cytochrome b pseudogene, partial cds  
D86479\_at Non-lens beta gamma-crystallin like protein (AIM1) mRNA, partial cds  
D82326\_at Amino acid transport-related protein mRNA  
X78565\_at HXB Hexabrachion (tenascin C, cytотactин)

Figure 1B

Figure 2B

34	Z28407_at	RPL8 Ribosomal protein L8
35	U63842_at	Neurogenic basic-helix-loop-helix protein (neuroD3) gene
36	Z22548_at	Thiol-specific antioxidant protein mRNA
37	U50743_at	Na,K-ATPase gamma subunit mRNA
38	U30521_at	FRAP/FK506 binding protein 12-rapamycin associated protein
39	X60489_at	Elongation factor-1-beta
40	M94250_at	MDK Midkine (neurite growth-promoting factor 2)
41	X52599_at	NGFB Nerve growth factor beta
42	M81757_at	40S RIBOSOMAL PROTEIN S19
43	L19527_at	RPL27 Ribosomal protein L27
44	U14968_at	Ribosomal protein L27a mRNA
45	U65011_at	Preferentially expressed antigen of melanoma (PRAME) mRNA
46	M68864_at	ORF mRNA
47	HG311-HT311_at	Ribosomal Protein L30
48	X55715_at	RPS3 Ribosomal protein S3
49	U14972_at	Ribosomal protein S10 mRNA
50	M13934_cds2_at	RPS14 gene (ribosomal protein S14) extracted from Human ribosomal protein S14 gene

### Low in Medulloblastoma (MD) High in Glioblastoma (Glio)

Gene	Description
1	X75861_at
2	X86693_at
3	M27891_at
4	X86809_at
5	U60061_at
6	M93426_at
7	D49824_s_at
8	D13631_s_at
9	V00594_at
10	L48513_at
11	L20298_at
12	Z24725_at

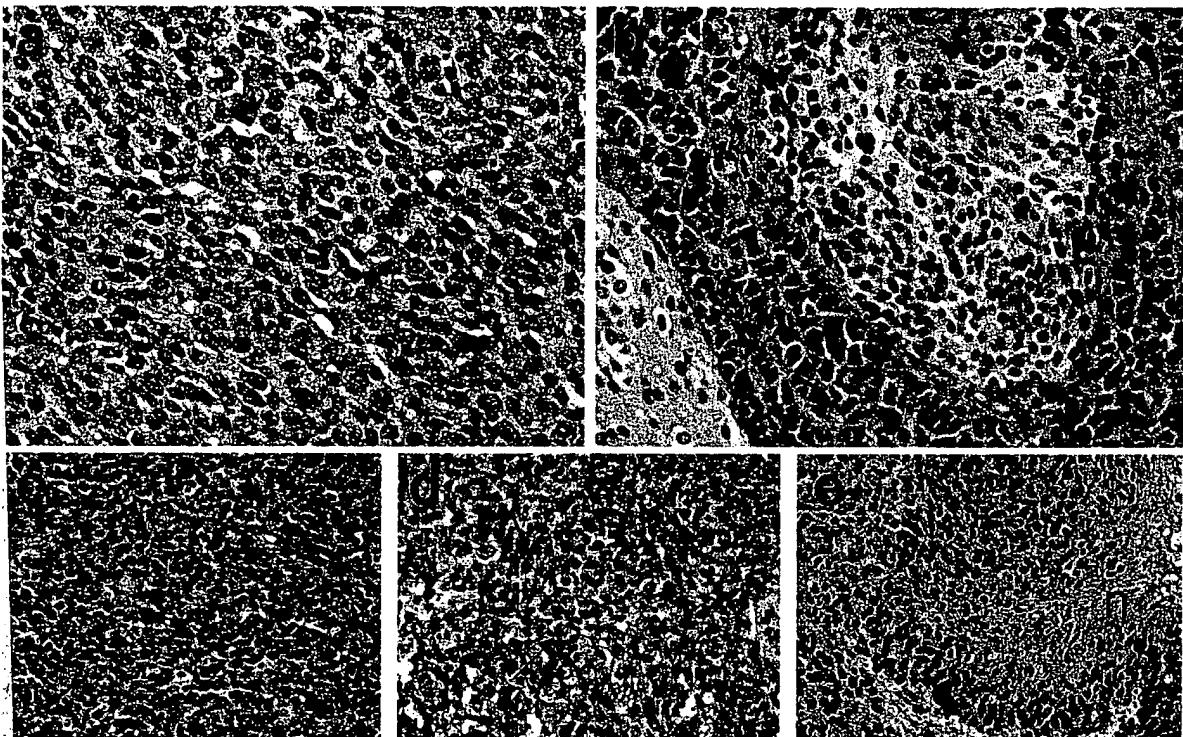
Figure 3A

		LYSOSOMAL PRO-X CARBOXYPEPTIDASE PRECURSOR
13	L13977_at	
14	M32886_at	SRI Sarcin
15	Z31560_s_at	SOX2 SRY (sex determining region Y)-box 2
16	M63838_s_at	Interferon-gamma induced protein (IFI 16) gene
17	U50928_at	PKD2 Autosomal dominant polycystic kidney disease type II
18	U48705_m1_s_at	Receptor tyrosine kinase DDR gene
19	U32331_at	RG mRNA, complete sequence
20	S72043_m1_at	GIF=growth inhibitory factor [human, brain, Genomic, 2015 nt]
21	U45955_at	Neuronal membrane glycoprotein M6b mRNA, partial cds
22	X04828_at	GNA12 Guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 2
23	J00105_s_at	BETA-2-MICROGLOBULIN PRECURSOR
24	S82297_at	BETA-2-MICROGLOBULIN PRECURSOR
25	HG658-HT658_f_at	Major Histocompatibility Complex, Class I, C (Gb:X58536)
26	X56841_at	HLA-E MHC class I antigen HLA-E
27	U03090_at	Ca2+-dependent phospholipase A2 mRNA
28	L40397_at	(clone S31i125) mRNA, 3' end of cds
29	D32050_at	AARS Alanyl-tRNA synthetase
30	D25304_at	KIAA0006 gene, partial cds
31	L25798_at	HMGCS1 3-hydroxy-3-methylglutaryl-Coenzyme A synthase 1 (soluble)
32	M61199_at	CLEAVAGE SIGNAL-1 PROTEIN
33	HG2917-HT3061_f_at	Major Histocompatibility Complex, Class I, E (Gb:M21533)
34	U44772_at	Palmitoyl protein thioesterase mRNA
35	D63486_at	KIAA0152 gene
36	S72008_at	CDC10 Cell division cycle 10 (homologous to CDC10 of <i>S. cerevisiae</i>
37	L11373_at	Protocadherin 43 mRNA for abbreviated PC43
		CSF1R Colony stimulating factor 1 receptor, formerly McDonough feline sarcoma viral (v-fms) oncogene homolog
38	X03663_at	Clone A9A2BRB7 (CAC)n(GTG)n repeat-containing mRNA
39	U00952_at	Staf50 mRNA
40	X82200_at	Zinc finger protein, Hsaf1
41	X98833_m1_at	A2M Alpha-2-macroglobulin
42	M11313_s_at	Fructose 6-phosphate,2-kinase/fructose 2,6-bisphosphatase
43	D49817_at	LAMP1 Lysosome-associated membrane protein 1
44	J04182_at	APOE Apolipoprotein E
45	M12529_at	Metallothionein
46	X64177_f_at	Clathrin assembly protein lymphoid myeloid leukemia (CALM) mRNA
47	U45976_at	

2825.2023-001  
EXCITATORY AMINO ACID TRANSPORTER 1  
Major Histocompatibility Complex, Class I, E (Gb:M20022)  
COMPLEMENT C3 PRECURSOR  
2825.2023-000  
48 D26443\_at  
49 HG2915-HT3059\_f\_at  
50 K02765\_at  
#182886

Figure 3B

Figure 4A



NOTE TO 5039801  
NOTE TO 5039802

BEST AVAILABLE COPY

NOTE TO SOURCEBOOK

Figure 4B

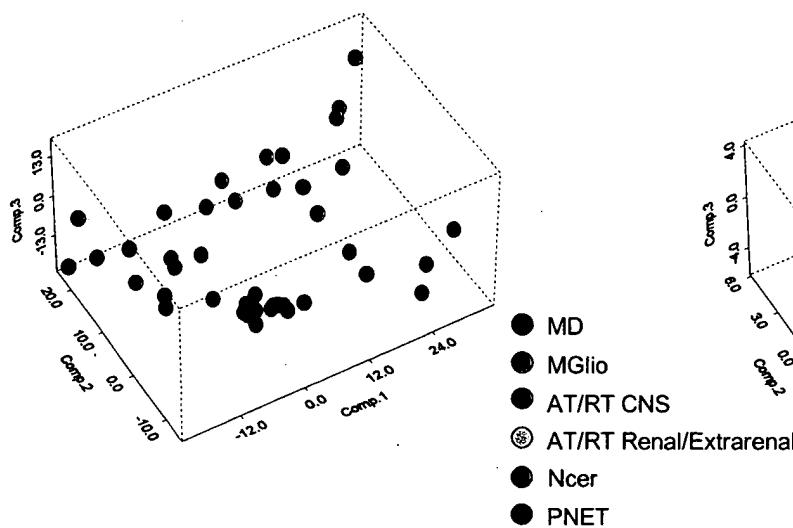


Figure 4C

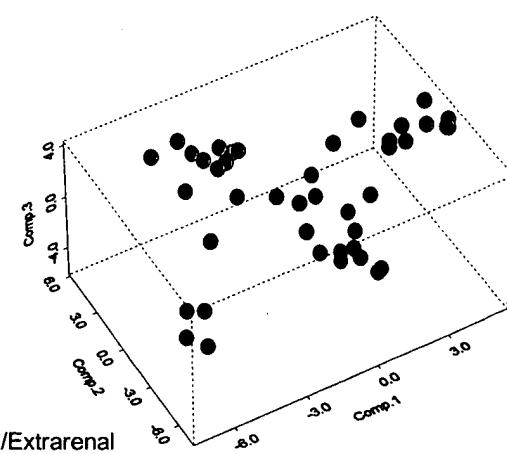


Figure 4D

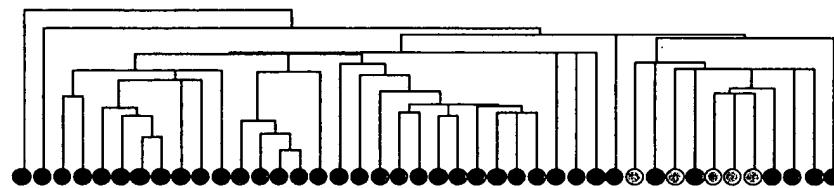
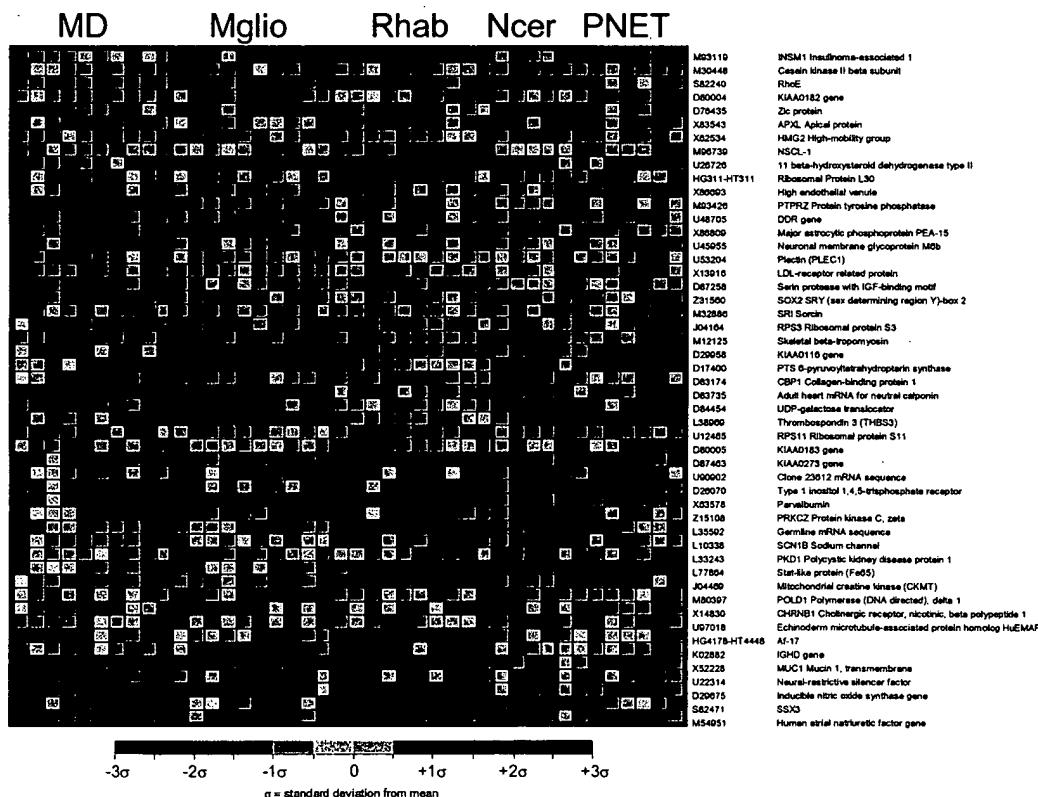


Figure 4E



BEST AVAILABLE COPY

Figure 5A

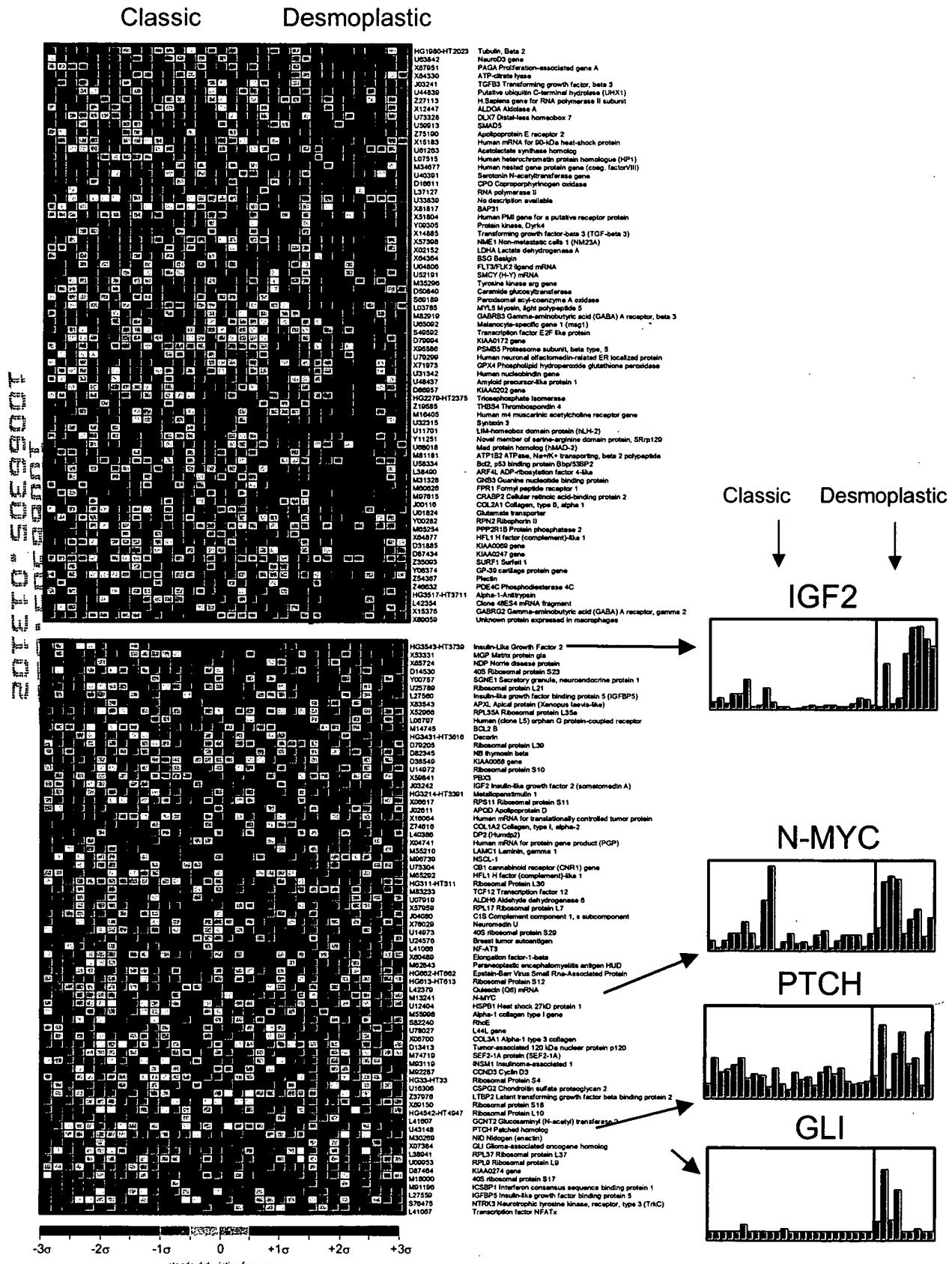


Figure 5B

**BEST AVAILABLE COPY**

Figure 6A

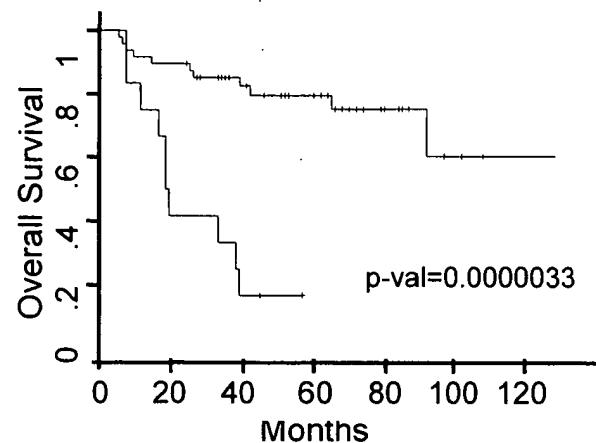


Figure 6B

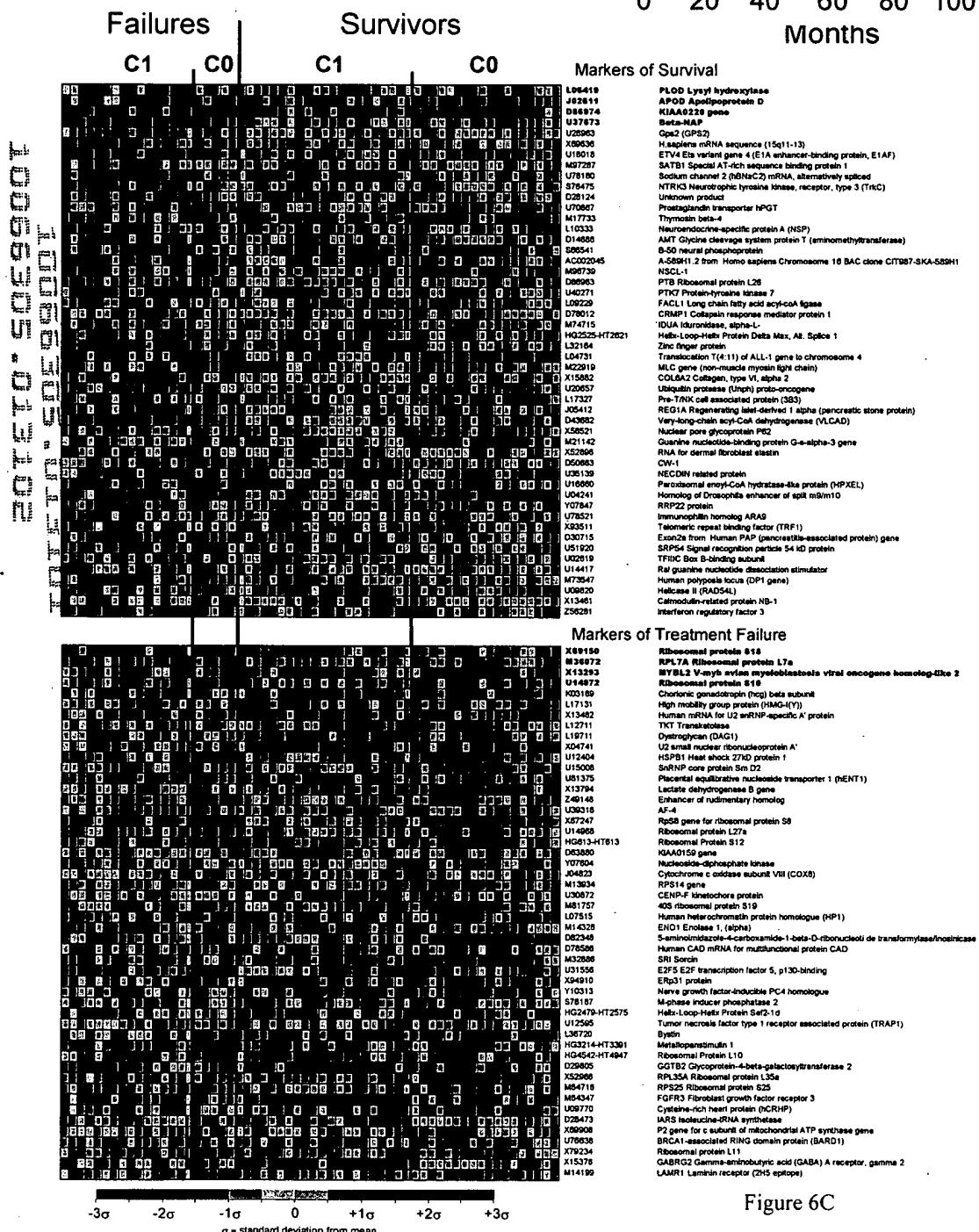


Figure 6C

BEST AVAILABLE COPY